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Remarks:
Amended claims in accordance with Rule 137(2) EPC.

(54) Removable handle for windows or doors

(57) The present invention relates to a removable handle (1) for windows or doors that can be removed from the window or door frame to enable the panes to overlap when the window or door is of the sliding type, wherein the handle can be removed by pushing a button (2), in such a way that the pane adjacent to the handle-bearing pane does not collide with the handle during movement, the presence of a handle on each pane not being necessary, as with the removable handle (1) of the present invention it is possible to open first one pane and then the other.

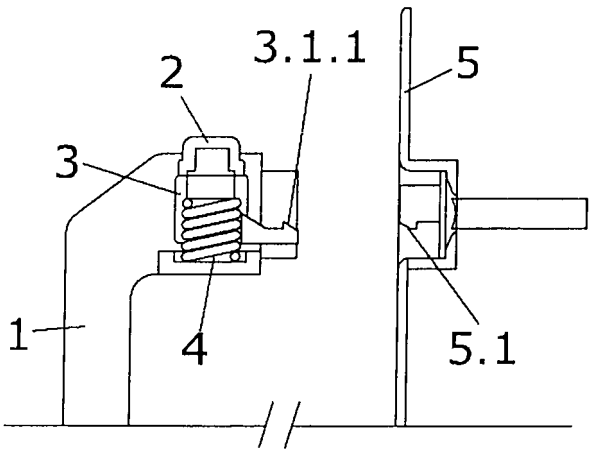

FIG.4

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a removable handle for windows or doors that can be removed from the window or door frame in order to enable the panes to overlap when the window or door is of the sliding type.

[0002] Due to its special configuration, the handle may be removed by pushing a button with a finger, in such a way that the pane adjacent to the handle-bearing pane does not collide with the handle during movement.

[0003] Additionally, in a double pane door or window, the presence of a handle on each pane is not necessary, because with the removable handle of the present invention it is possible to open one of the panes first and then the other.

BACKGROUND OF THE INVENTION

[0004] Handles for windows or doors that are assembled on the window or door frame, thus enabling them to open and close, are well known in the state of the art.

[0005] These include French Patent FR2560271 relating to a universal handle with a zip that raises or lowers two L-shaped brackets that activate the mechanism that blocks or unblocks the aperture of the door or window pane.

[0006] However, when the front handle is used in sliding windows, said handle abuts against the adjacent pane and does not allow said adjacent pane to cross in front of or behind the handle-bearing pane.

[0007] In the case of panes that cannot be disassembled, the adjacent pane cannot be cleaned from the exterior due to the fact that, when the handle-bearing pane is opened, it remains in front of the adjacent pane, thereby blocking the transparent surface to be cleaned.

[0008] Additionally, sliding double pane doors or windows require two handles, one to move each of the panes.

[0009] In like manner, the removable handle prevents the undesired aperture of the door or window by children, elderly or any unauthorized persons.

[0010] All of these drawbacks are overcome by the removable handle of the present invention, which allows the sliding door or window panes to overlap, in such a way that a single handle is required to open and close the door or window panes.

DESCRIPTION OF THE INVENTION

[0011] The present invention relates to a removable handle for windows or doors that can be removed from the window or door frame in order to enable the panes to overlap when the window or door is of the sliding type.

[0012] The removable handle has a driving lever and push-button attached to a trigger, wherein the push-button, when activated, pushes against the resistance put up by an elastic element attached to the push-button, thereby enabling the movement of the trigger.

[0013] The window or door frame has an anchor which is attached to the rod that activates the window aperture or closure mechanism, said mechanism not being the object of the present invention.

[0014] When the handle is anchored to the window frame, the trigger is retained by said anchor in such a way that, when the button is pushed, the trigger moves, overcoming the resistance of the elastic element and thereby freeing itself from the anchor. By moving the handle away from the frame, said handle is removed.

[0015] In order to replace the handle on the window or door frame, the trigger has to be turned towards the anchor and then pushed against the window or door frame, in such a way that the trigger, at first, transmits the force of contact with the anchor to the elastic element and then, when the elastic element returns to its original state, the trigger is retained by the anchor.

[0016] Additionally, in this way, it is not necessary for each of the panes to have a handle, as with the removable handle of the present invention it is possible to open first one pane and then the other.

[0017] In summary, the invention relates to a removable handle for windows or doors of the type that includes a driving lever to open and close the handle-bearing pane, characterized in that by pushing a button attached to a trigger through which an elastic element extends, a trigger of an anchor on the window or door frame is freed, thereby enabling the removal of the handle.

DESCRIPTION OF DRAWINGS

[0018] The present specification is complemented by a set of drawings that represent the preferred embodiment of the invention in an unlimitative way.

Figure 1.- Shows a perspective view of the removable handle for windows or doors coupled to the base section of the window or door frame.

Figure 2.- Shows a cross-sectional view of the removable handle shown in Figure 1.

Figure 3.- Shows a cross-sectional view of the removable handle after the push-button has been activated.

Figure 4.- Shows a cross-sectional view of the removable handle after it has been replaced on the base section of the window or door frame.

Figure 5.- Shows a perspective view of a sliding double pane window wherein a single handle is required to open and close the panes, in addition to which these may overlap without colliding with the handle.

PREFERRED EMBODIMENT OF THE INVENTION

[0019] In accordance with the above, the present invention relates to a removable handle for windows or doors that can be removed from the window or door frame

in order to enable the panes to overlap when the window or door is of the sliding type.

[0020] The removable handle consists of a driving lever (1) whereon a push-button (2) has been fitted, attached to the body (3) of a trigger from which said trigger (3.1) protrudes.

[0021] An elastic element (4) extends through the body (3) of the trigger which, in this example of preferred embodiment, consists of a compression spring, while the window or door frame has a base section (5) that includes an anchor (6), responsible for retaining the trigger (3.1) when the handle is coupled to the window or door frame.

[0022] In this way, when the button (2) is pushed to remove the handle, the trigger (3.1) is freed from the anchor (6), thereby enabling its removal. Subsequently, the recovery force of the elastic element (4) enables the push-button (2) to return to its initial position.

[0023] In order to replace the handle on the window or door frame, the driving lever (1) must be directed towards the base section (5) of the window or door frame, in such a way that an inclined protrusion (3.1.1) of the trigger (3.1) comes into contact with another inclined protrusion (6.1) of the anchor (6).

[0024] At that moment, the elastic element (4) offers resistance to the movement of the trigger (3.1), which is prolonged until the inclined protrusion (3.1.1) of the trigger (3.1) surpasses the inclined protrusion (6.1) of the anchor (6), thereby allowing the elastic element (4) to return to its original state while the trigger (3.1) is retained inside the anchor (6).

[0025] The base section (5) includes a finger groove (5.1) which is used as a hand hold to move the window or door pane when the handle has been removed.

[0026] The essence of the invention is not altered by variations in materials, shape, size and assembly of the components, described above in an unlimitative way, which should suffice for its reproduction by a person skilled in the art.

Claims

1. Removable handle for windows or doors of the type that include a driving lever (1) to open and close the handle-bearing pane (2), **characterized in that** by activating a push-button (2) attached to the body (3) of a trigger through which an elastic element (4) extends, a trigger (3.1) is freed from an anchor (6) on the window or door frame, thereby enabling the removal of the handle.

2. Removable handle for windows or doors, according to Claim 1, **characterized in that**, in order to replace the handle on the window or door frame, the driving lever (1) is directed towards said window or door frame, in such a way that an inclined protrusion (3.1.1) of the trigger (3.1) comes into contact with another inclined protrusion (6.1) of the anchor (6), in such a way that the elastic element (4) offers resistance to the movement of the trigger (3.1), which is prolonged until the inclined protrusion (3.1.1) of the trigger (3.1) surpasses the inclined protrusion (6.1.) of the anchor (6), thereby allowing the elastic element (4) to return to its original state while the trigger (3.1) is retained inside the anchor (6).

3. Removable handle for windows or doors, according to Claim 1, **characterized in that** the elastic element (4) consists of a compression spring.

4. Removable handle for windows or doors, according to Claim 1, **characterized in that** the anchor (6) forms part of a base section (5) located in the window or door frame.

5. Removable handle for windows or doors, according to Claim 4, **characterized in that** the base section (5) includes a finger groove (5.1) which is used as a hand hold to move the window or door pane when the handle has been removed.

Amended claims in accordance with Rule 137(2) EPC.

1. Removable handle for windows or doors of the type that include a driving lever (1) to open and close a window or door, **characterized in that** the handle has a push-button (2) attached to the body (3) of a trigger through which an elastic element (4) extends, by activating a push-button (2) a trigger (3.1) can be freed from an anchor (6) on the window or door frame, thereby enabling the removal of the handle.

2. Removable handle for windows or doors, according to claim 1, **characterized in that** the trigger (3.1) is provided with an inclined protrusion (3.1.1) while the anchor (6) is also provided with another inclined protrusion (6.1)

3. Removable handle for windows or doors, according to Claim 1, **characterized in that** the elastic element (4) consists of a compression spring.

4. Removable handle for windows or doors, according to Claim 1, **characterized in that** the anchor (6) forms part of a base section (5), the base section (5) being suitable to be located in the window or door frame.

5. Removable handle for windows or doors, according to Claim 4, **characterized in that** the base section (5) includes a finger groove (5.1) which is suitable to be used as a hand hold to move the window or door pane when the handle has been removed.

6. Method of removing a door handle according to claims 1 to 5, **characterized in that**, in order to replace the handle on the window or door frame, the driving lever (1) is directed towards said window or door frame, in such a way that an inclined protrusion (3.1.1) of the trigger (3.1) comes into contact with another inclined protrusion (6.1) of the anchor (6), in such a way that the elastic element (4) offers resistance to the movement of the trigger (3.1), which is prolonged until the inclined protrusion (3.1.1) of the trigger (3.1) surpasses the inclined protrusion (6.1.) of the anchor (6), thereby allowing the elastic element (4) to return to its original state while the trigger (3.1) is retained inside the anchor (6).

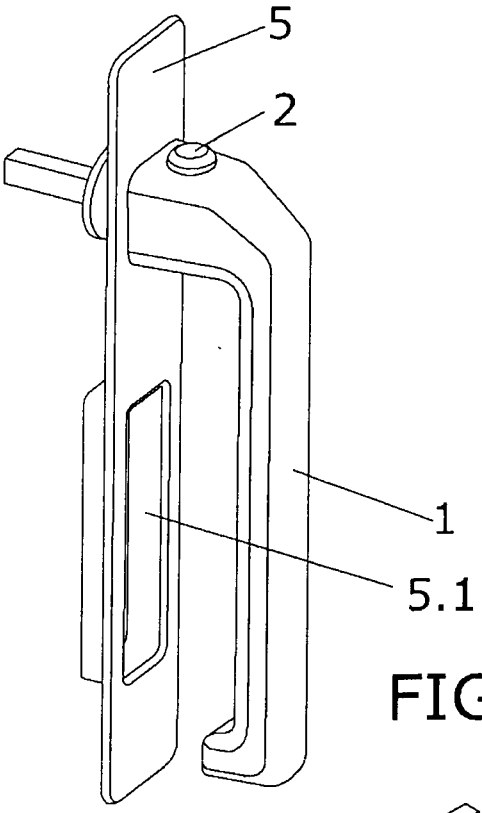

FIG.1

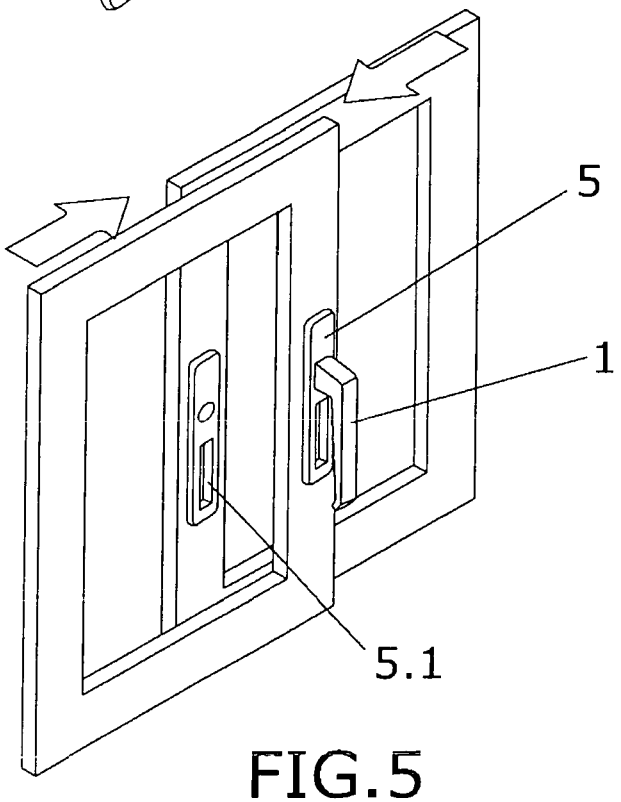

FIG.5

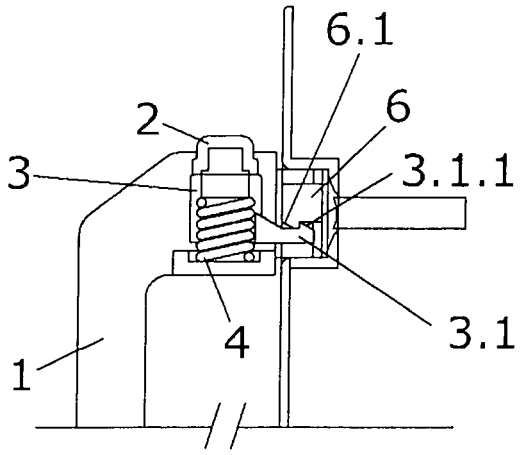

FIG.2

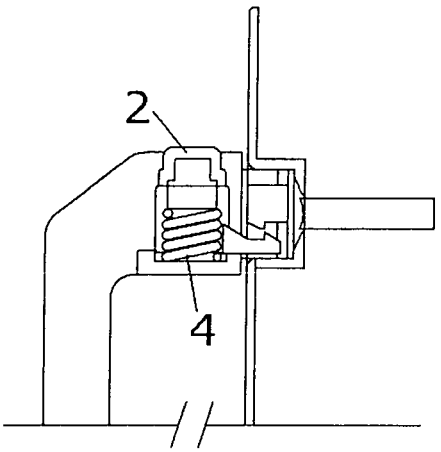

FIG.3

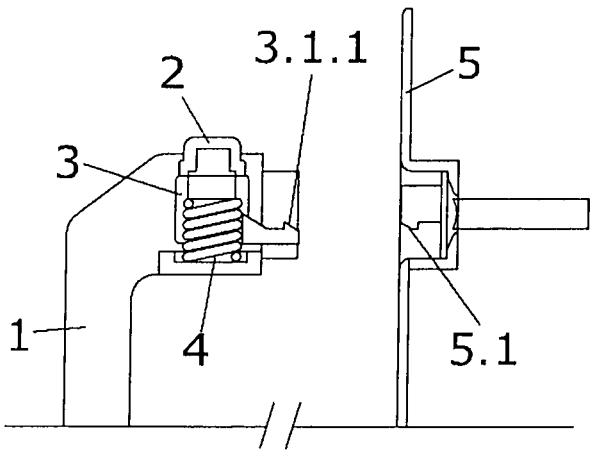

FIG.4

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 38 1050

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 296 05 395 U1 (JADO DESIGN ARMATUR UND BESCHL [DE]) 30 May 1996 (1996-05-30) * the whole document * * page 2, line 11 - line 18 * * page 8, line 5 - line 17 *	1-5	INV. E05B3/00
A	GB 853 801 A (HEINRICH WILKE) 9 November 1960 (1960-11-09) * the whole document *	1-5	
A	FR 2 763 354 A (FRESNE MANUELA CLAUDIA [FR]) 20 November 1998 (1998-11-20) * the whole document *	1-5	
A	US 3 256 595 A (BOYDEN WALTER D) 21 June 1966 (1966-06-21) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC) E05B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	10 December 2007	WAGNER, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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10-12-2007

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GB 853801 A	09-11-1960	NONE	
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- FR 2560271 **[0005]**